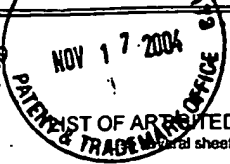



Form PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF ARTS BY APPLICANT (Include sheets if necessary)	ATTORNEY DOCKET NO. M122-2308	SERIAL NO. 10/615, 051
	APPLICANT: Brian A. Vaarstra	
	FILING DATE July 7, 2003	GROUP ART UNIT 2842 2823

U.S. PATENT DOCUMENTS							
Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
BK	AA	3,990,927	11/1976	Montier			
BK	AB	4,474,975	10/1984	Clemons et al.			
BK	AC	5,156,881	10/1992	Okano et al.			
BK	AD	5,182,221	01/1993	Sato			
BK	AE	5,410,176	04/1995	Liou et al.			
BK	AF	5,470,798	11/1995	Ouellet			
BK	AG	5,719,085	02/1998	Moon et al.			
BK	AH	5,741,740	04/1998	Jang et al.			
BK	AJ	5,776,557	07/1998	Okano et al.			

FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
BK	AJ	02277253A	11/1990	Japan (Hayashide et al.)			Abstract	
	AK	146224	01/1996	Japan				
BK	AL	06-334031	12/1994	Japan			Abstract	

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
BK	AM	Beekmann et al., <i>Sub-micron Gap Fill and In-Situ Planarisation using Flowfilm™ Technology</i> , Electrotech 1-7
		ULSI Conference, Portland, OR (October 1995).
BK	AN	Horie et al., <i>Kinetics and Mechanism of the Reactions of O<sup>2</sup>P with SiH<sub>4</sub>, CH<sub>3</sub>SiH<sub>3</sub>, (CH<sub>3</sub>)<sub>2</sub>SiH<sub>2</sub>, and (CH<sub>3</sub>)<sub>3</sub>SiH</i> , 95 J. PHYS. CHEM 4393-4400 (1991).
BK	AO	Joshi et al., <i>Plasma Deposited Organosilicon Hydride Network Polymers as Versatile Resists for Entirely Dry Mid-Deep UV Photolithography</i> , 1925 SPIE 709-720 (January 1993).
EXAMINER		DATE CONSIDERED
		Brook Keredu 3/12/2005
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

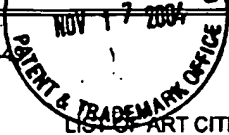
Form PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MI22-2308	SERIAL NO. 10/615,051
	APPLICANT: Brian A. Vaarstra	
	FILING DATE July 7, 2003	GROUP ART UNIT 2812 2823

U.S. PATENT DOCUMENTS							
Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
BA	AA	5,786,039	07/1998	Brouquet			
BA	AB	5,801,083	09/1998	Yu et al.			
BA	AC	5,863,827	01/1999	Joyner			
BA	AD	5,883,006	03/1999	Iba			
BA	AE	5,888,880	03/1999	Gardner et al.			
BA	AF	5,895,253	04/1999	Akram			
BA	AG	5,904,540	05/1999	Sheng et al.			
BA	AH	5,930,645	07/1999	Lyons et al.			
BA	AI	5,943,585	08/1999	May et al.			

FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
BA	AJ	05-315441	11/1993	Japan			Abstract	

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)			
	AM		Kiermasz et al., Planarisation for Sub-Micron Devices Utilising a New Chemistry, Electrotech 1-2, DUMIC
BA			Conference, California (February 1995).
	AN		Kojima et al., Planarization Process Using a Multi-Coating of Spin-on-Glass, V-MIC Conference, pp. 390-396
BA			(June 13-14, 1988).
	AO		Matsuura et al., A Highly Reliable Self-planarizing Low-k Intermetal Dielectric for Sub-quarter Micron
BA			Interconnects, 97 IEEE 785-788 (July 1997).
EXAMINER		DATE CONSIDERED	
		BROOK KEKEDU 3/17/2005	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Form PTO-144	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MI22-2308	SERIAL NO. 10/615,051
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)		APPLICANT: Brian A. Vaarstra	
		FILING DATE July 7, 2003	GROUP ART UNIT 2812-2823

U.S. PATENT DOCUMENTS							
Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
BK	AA	5,950,094	09/1999	Lin et al.			
BK	AB	5,960,299	09/1999	Yew et al.			
BK	AC	5,972,773	10/1999	Liu et al.			
BK	AD	5,998,280	12/1999	Bergemont et al.			
BK	AE	6,030,881	02/2000	Papasouliotis et al.			
BK	AF	6,051,477	04/2000	Nam			
BK	AG	6,156,674	12/2000	Li et al.			
BK	AH	6,719,012	4/2004	Doan et al.			
BK	AI	6,583,028	6/2003	Doan et al.			
BA	AJ	5,570,469	6/1998	Uram et al.			
	AK						

EV372470700

FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AL							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
BK	AM	Matsuura et al., <i>Novel Self-planarizing CVD Oxide for Interlayer Dielectric Applications</i> ; 1994; 94 IEEE 117-120.
BK	AN	McClatchie et al. <i>Low Dielectric Constant Flowfill™ Technology for IMD Applications</i> , 7 pages (pre-August 1999).
BK	AO	Withnall et al., <i>Matrix Reactions of Methylsilanes and Oxygen Atoms</i> , 92 J. PHYS. CHEM. 594-602 (1988).
EXAMINER		DATE CONSIDERED
		<i>Brook Kelsch</i> 7/12/2005

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-100 (Rev. 11-2000)

**U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE**

ATTY. DOCKET NO.  
MI22-2308

SERIAL NO.  
10/615,051

APPLICANT: Brian A. Vaarstra

FILING DATE  
July 7, 2003

GROUP  
2812 2823

EXAMINER'S ART CITED BY APPLICANT  
(Use several sheets if necessary)

U.S. PATENT DOCUMENTS							
Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
BK	AA	5,105,253	04/1992	Pollock	357	49	
BK	AB	5,604,149	02/1997	Paoli et al.	437	67	
BK	AC	5,616,513	04/1997	Shepard	438	402	
BK	AD	5,786,263	07/1998	Perera	438	431	
BK	AE	5,895,255	04/1999	Tsuchiaki	438	427	
BK	AF	5,923,073	07/1999	Aoki et al.	257	501	
BK	AG	5,981,354	11/1999	Spikes et al.	438	424	
BK	AH	5,989,978	11/1999	Peidous	438	436	
BK	AI	6,033,961	03/2000	Xu et al.	438	295	

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No

EV372470700

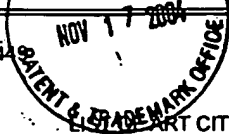
OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)

BK	AM	Curtis et al, "APCVD TEOS: O3 Advanced Trench Isolation Applications", Semiconductor Fabtech, 9 <sup>th</sup> Ed., p. 241 - 247
BK	AN	George, S.M. et al., "Atomic layer controlled deposition of SiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> using ABAB... binary reaction sequence chemistry", Applied Surface Science 82/83, Elsevier Science B.V., July 10, 1994, p. 460-467.
BK	AO	Morishita et al. "Atomic-layer chemical-vapor-deposition of silicon-nitride", Applied Surface Science 112, Elsevier Science B.V., 1997, p. 198-204.

EXAMINER: DATE CONSIDERED

Brown Kekede 3/17/2005

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. M122-2308	SERIAL NO. 10/615,051
	PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)			
	FILING DATE July 7, 2003		GROUP 2812-2823	

## U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
BK	AA	6,090,675	07/2000	Lee et al.	438	301	
BU	AB	6,171,962	01/2001	Karlsson et al.	438	692	
BK	AC	6,187,651	02/2001	Oh	438	435	
BU	AD	6,191,002	02/2001	Koyanagi	438	431	
BK	AE	6,326,282	12/2001	Park et al.	438	424	
BU	AF	6,329,266	11/2001	Hwang et al.	438	424	
BU	AG	6,355,966	03/2002	Trivedi	257	499	
BK	AH	6,583,060	06/2003	Trivedi	438	700	
BU	AI	10/806,923		Li et al.			03/22/2004

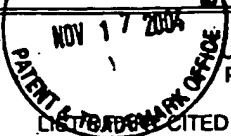
## FOREIGN PATENT DOCUMENTS

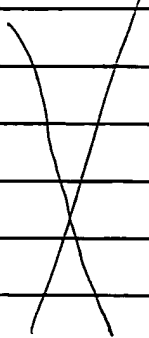
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AJ							

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)

BU	AK		Yokoyama et al. "Atomic layer controlled deposition of silicon nitride and in situ growth observation by infrared reflection absorption spectroscopy", Applied Surface Science 112, Elsevier Science B.V., 1997, p. 75-81.
BU	AL		Gasser et al., "Quasi-monolayer deposition of silicon dioxide", Elsevier Science S.A., 1994, p. 213-218.
BU	AM		Shareef et al., "Subatmospheric chemical vapor deposition ozone/TEOS process for SiO <sub>2</sub> trench filling", J. Vac. Sci. Technol. B 13(4), Jul/Aug 1995, p. 1888-1892.
	AN		
EXAMINER		DATE CONSIDERED	
		EV372470700 Brown Kehde 3/17/2005	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LISTED DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. MI22-2308	SERIAL NO. 10/615,051
	APPLICANT: Brian A. Vaarstra	
	FILING DATE July 7, 2003	GROUP 2812-2823

U.S. PATENT DOCUMENTS							
Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
BN	AA	6,448,150	09/2002	Tsai et al.	438	427	
BN	AB	6,617,251	09/2003	Kamath et al.	438	691	
BN	AC	2001/0006255 A1	07/2001	Kwon et al.	257	751	
BN	AD	2001/0006839 A1	07/2001	Yeo	438	435	
BN	AE	2001/0046753 A1	11/2001	Gonzalez et al.	438	424	
BN	AF	2002/0004284 A1	01/2002	Chen	438	427	
BN	AG	2004/0082181	04/2004	Doan et al.			
BN	AH	10/931,524		Sandhu			08/31/2004

FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AJ							

EV372470700

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)			
BN	AJ		Disclosed Anonymous 32246, "Substrate Contact with Closed Bottom Trenches", Research Disclosure, Feb. 1991, 1 page.
	AK		
	AL		
	AM		
EXAMINER		DATE CONSIDERED	
		Brook Kebede 3/12/2005	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

Form PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
MI22-2308SERIAL NO.  
UnknownLIST OF ART CITED BY APPLICANT  
(Use several sheets if necessary)

APPLICANT: Brian A. Vaartstra

FILING DATE  
Filed HerewithGROUP  
Unknown

2823

## U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
Bu	AA	6,300,219 B1	10/09/01	Doan et al.			
Bu	AB	6,534,395 B2	03/18/03	Werkhoven et al.			
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
Bu	AJ	02/27063 A2	04.04.02	WIPO (Gordon et al.)				
	AK							
	AL							

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)

Bu	AM	Hausmann et al., <i>Rapid Vapor Deposition of Highly Conformal Silica Nanolaminates</i> , 298 SCIENCE 402-406, (11 October 2002).
Bu	AN	Klaus et al., <i>Atomic Layer Deposition of SiO<sub>2</sub> Using Catalyzed and Uncatalyzed Self-Limiting Surface Reactions</i> , 6 SURFACE REVIEW AND LETTERS, Nos. 3 & 4, pp. 435-448 (1999).
Bu	AO	Miller et al., <i>Self-limiting chemical vapor deposition of an ultra-thin silicon oxide film using tri-(tert-butoxy)silanol</i> , 397 THIN SOLID FILMS 78-82 (2001).
EXAMINER		DATE CONSIDERED
		Brook Kehede 3/17/2005

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2308		SERIAL NO. 10/615,051	
<div style="position: relative; height: 100px;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border: 2px solid black; border-radius: 50%; text-align: center; line-height: 100px; font-size: 24px; font-weight: bold;"> O I P E J C 6 0 DEC 05 2003 PATENT &amp; TRADEMARK OFFICE </div> </div>				LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)			
				APPLICANT: Brian A. Vaartstra			
FILING DATE July 7, 2003				GROUP 2812 <i>2823</i>			

PATENT DOCUMENTS							
Examiner's Initials	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
<i>Ba</i>	AA	10/655,699	Derderian et al.			09/05/2003	
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

FOREIGN PATENT DOCUMENTS							
Document Number	Date	Country	Class	Subclass	Translation		
					Yes	No	

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
<i>Bm</i>	AM	Hausmann et al., "Catalytic vapor deposition of highly conformal silica nanolaminates", Department of Chemistry and Chemical Biology, Harvard University, May 14, 2002, pp. 1-13.
	AN	
	AO	

EXAMINER	DATE CONSIDERED
	<i>Brown Kehede 3/17/2005</i>

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.